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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,367	03/26/2004	Shinji Usami	119303	7631
25944	7590	05/06/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,367	USAMI ET AL.	
	Examiner	Art Unit	
	Tran N. Nguyen	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being fully anticipated by **Ohmura et al** (US 6,700,287).

Ohmura discloses a rotary electric machine comprising:

a housing (12); and
an armature having a shaft (13) rotatably supported in the housing and an armature core (21) fixedly connected to the shaft, wherein:
the armature core is formed by laminating a plurality of core sheets (22),
each core sheet having a center hole (28) and outer holes (26) connected to the center hole;

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the armature core is connected to the shaft and an outer surface of the shaft contacting the center holes of the laminated core sheets is a smooth surface having no knurls (as shown in figs 1, 5, 11);

the core sheets (22) are laminated so that the outer holes (28) of the core sheets communicate with one another, thereby forming air passages in the armature core in the axial direction hereof (col 6, lines 33+);

the core sheets are laminated so that the outer holes of the core sheets are positioned in a shifted relation to one another by a predetermined angle around the axial direction, thereby forming air passages skewed relative to the axial direction (figs 2A-4B, 7A-7B).

Regarding the method claimed language that the shaft is connect to the core *by forcibly inserting the shaft into the center holes of the laminated core sheets*, Ohmura discloses that the shaft is fixed in the center hole (28) of the core and the figures show the shaft has a smooth surface without any knurls. Therefore, Ohmura discloses the structural features and arrangement of the shaft and the core, whether the shaft is forcibly inserted in the core' center hole or by any other fixing methods is considered a method of forming claimed language, which is not given any patentability weight because the method of forming a device is not germane to the issue of patentability of the device itself. A "product by process" claim is directed to the product per se, no matter how actually made, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmimn*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohmura** in view of **Olivier** (US 4,489,249).

Ohmura discloses the claimed invention, except for the added limitations of the following:

(a) the plurality of core sheets are laminated by dividing the same into a few blocks (as in claim 4);

(b) the laminated core sheets are divided into a few blocks; and the outer holes of the core sheets are positioned at a same position in each block and are shifted block by block by a predetermined angle around the axial direction, thereby forming air passages skewed block by block relative to the axial direction in the armature core (as in claim 6); and,

(c) the predetermined angle is an angle corresponding to one slot pitch (as in claims 5 and 7).

Olivier, however, teaches a rotary electric machine comprising a laminated core (fig 3), wherein the laminated core can either formed by laminating each individual core plate or laminating a plurality of blocks (C1-C10, etc.) that are made up of a small number of core plates being stacked together, and axially adjacent laminated blocks are skewed from one another through an angle which is equal to one or more pole pitch (col 2 lines 55+). **Olivier** states that these features of the core would give an enhanced mechanical strength to the assembly.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the laminated core by configuring the core as a plural laminated core blocks that are stacked at a skewed angle of one slot pitch with respect to the axial direction thereof, as taught by **Olivier**. Doing so would not only facilitate the assembly of the core but also enhance the mechanical strength thereof.

4. **Claims 8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohmura** and **Olivier**, as applied in the rejection against the base claims, and in view of **Shiga et al** (US 5,650,683).

The combination of Ohmura and Olivier refs substantially discloses the claimed invention, except for the added limitations of *the armature further having conductor segments, each conductor segment including an in-slot portion disposed in a slot formed on an outer periphery of the armature core and a coil end bent from the in-slot portion and disposed on an axial end surface of the armature core; and the coil ends of the conductor segments are circularly arranged on the axial end surface of the armature core, thereby forming a commutator surface that contacts brushes.*

Shiga, however, discloses a rotary machine having an armature and a commutator (figs 1-17D), wherein the armature having conductor segments (530), each conductor segment including an in-slot portion disposed in a slot formed on an outer periphery of the armature core and a coil end bent from the in-slot portion and disposed on an axial end surface of the armature core; and the coil ends of the conductor segments are circularly arranged on the axial end surface of the armature core, thereby forming a commutator surface that contacts brushes. Shiga states that such armature with conductors forming a commutator would highly withstand mechanical and thermal loads and also reduce assembly parts such as separately formed commutator bars.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the armature by embodying the conductor segments that are formed a commutator surface that contacts brushes thereof, as taught by Shiga. Doing would provide an armature with less assembled part counts and enable the armature with an ability to highly withstand mechanical and thermal loads.

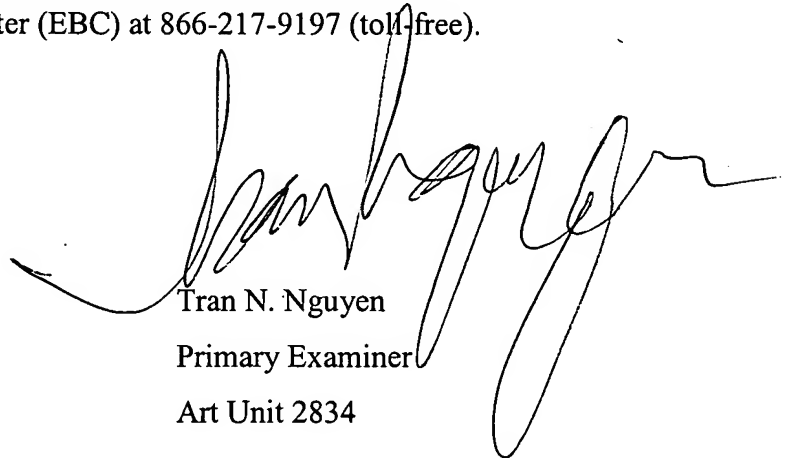
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
Art Unit 2834